

FOSS and Common Core ELA — Grade K



Contents

| | |
|--|----|
| Introduction | 1 |
| Reading Standards for Informational Text | 4 |
| Reading Standards: Foundational Skills..... | 8 |
| Writing Standards..... | 12 |
| Speaking and Listening Standards..... | 16 |
| Language Standards..... | 20 |

INTRODUCTION

Each FOSS investigation follows a similar design to provide multiple exposures to science concepts. The design includes these pedagogies.

- Active investigation, including outdoor experiences
- Writing in science notebooks to answer focus questions
- Reading in *FOSS Science Resources*
- Assessment to monitor progress and motivate student reflection on learning

In practice, these components are seamlessly integrated into a continuum designed to maximize every student's opportunity to learn. An instructional sequence may move from one pedagogy to another and back again to ensure adequate coverage of a concept.

The FOSS instructional design recognizes the important role of language in science learning. Throughout the pedagogical design elements, students engage in the practices of the Common Core State Standards for English Language Arts. The purpose of this chapter is to provide the big picture of how FOSS provides opportunities for the development and exercising of these practices through science. On the following pages, there is a chart that identifies the opportunities for kindergarten and where the relevant opportunities are found within the three FOSS modules.



Guiding Principles

When integrating language-arts instruction with FOSS, keep in mind these guiding principles:

- FOSS investigations follow a clear and coherent conceptual flow and a consistent instructional design. Students develop science knowledge by building a framework of concepts and supporting ideas.
- Common Core State Standards for ELA are introduced, developed, and practiced in the context of learning science content and engaging in the science and engineering practices. Students read and comprehend complex science texts related to their prior experience and knowledge. They write informational/explanatory texts, arguments to support claims, and narratives about experience in science. They engage in collaborative discussions about science and learn new vocabulary and language structures in context.
- The decision to use additional science texts, writing tasks, oral discourse opportunities, and vocabulary development activities is based on how well they address the science as well as the ELA standards.
- Instruction is differentiated to meet the needs of all students; the linguistic accommodations that are made for English learners support comprehensible input and accelerate academic language development. Language objectives for English learners in science instruction include the application of strategies that support construction of meaning from academic discussions and complex text, participation in productive discourse, and the ability to express ideas in writing clearly and coherently according to task, purpose, and audience.
- Formative assessment tools are used routinely to measure progress toward science understanding, use of science and engineering practices, and meeting literacy and language development goals. Assessment is viewed as a way to make student thinking visible and to determine next steps for instruction for both science and literacy. Instruction includes opportunities for students to assess themselves and peers.

Adhering to these guiding principles optimizes instructional time and, most importantly, benefits student learning by providing authentic and relevant contexts for building content knowledge, applying meaning-making strategies, and developing language and literacy skills.

Kindergarten is a year of wonder and exciting challenges as students expand their learning about the world around them. They engage

in interactive experiences with reading and writing, and develop the social norms necessary for productive discourse. They develop their abilities to make meaning from texts read aloud and begin to decode on their own. Their vocabularies increase and they continue to develop their communication skills. Kindergartners are expected to use the science and engineering practices to demonstrate their understanding of the core ideas. To accomplish this, students learn to ask and answer questions about key details in texts, use images to support understanding, describe connections between science ideas, and communicate their thoughts orally and in written form using models, drawings, and emerging writing.

Instructional Flow

In almost all investigations, the instructional flow is the same and provides these opportunities for effective integration of ELA standards.

- When **setting the context** for the lesson, students activate prior knowledge through class or small-group discussions where they ask and answer questions to get information and clarify understanding (SL 3), or describe familiar places, things, and events (SL 4).
- During the **active investigation**, students are expected to work with partners and in collaborative groups, and to engage in teacher-led discussions where they follow rules for discussion and continue a conversation through multiple exchanges (SL 1).
- In the **data management** phase, students make and record observations, and organize data in their notebooks (W 7). The notebook provides a space for students to recall information from experiences and to gather information to answer the focus question (W 8) and to use words and phrases acquired through conversations and readings (L 6).
- The **analysis** phase involves discussing observations, constructing explanations, and engaging in argumentation (SL 1). Students make meaning by drawing, dictating, and writing explanatory texts (W 2), opinion pieces (W 1), or narratives of events (W 3).
- **Reading** articles in *FOSS Science Resources* and other recommended readings provides a plethora of opportunities to address all the kindergarten reading standards for informational text.
- Lastly, the **assessment** tools and next-step strategies for engaging students in high-level critical thinking support the development of the Common Core State Standards capacities of the literate individual: demonstrate independence, build strong content knowledge, comprehend as well as critique, and value evidence.

TEACHING NOTE

Throughout the kindergarten FOSS modules, opportunities for addressing the ELA standards have been noted; however, these examples should not be considered the only places for integrating literacy skills.

READING STANDARDS FOR INFORMATIONAL TEXT

| | Grade K Standard | Materials and Motion Module |
|-----------------------|--|--|
| Key Ideas and Details | 1. With prompting and support, ask and answer questions about key details in a text. | Discuss articles in <i>FOSS Science Resources</i> Inv 1, Part 7, Steps 9, 10 Inv 2, Part 1, Steps 14, 15 Inv 3, Part 2, Steps 10, 11; Inv 3, Part 4, Step 9; Inv 3, Part 5, Steps 1, 2 Inv 4, Part 1, Steps 16, 17 Inv 4, Part 2, Steps 14, 15 |
| | 2. With prompting and support, identify the main topic and retell key details of a text. | Discuss and review articles in <i>FOSS Science Resources</i> Inv 1, Part 1, Step 20; Inv 1, Part 7, Steps 9, 10 Inv 2, Part 1, Steps 14, 15 Inv 3, Part 2, Step 11; Inv 3, Part 4, Step 9; Inv 3, Part 5, Steps 1-2 Inv 4, Part 1, Steps 16, 17 Inv 4, Part 2, Steps 14, 15 |
| | 3. With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text. | Discuss articles in <i>FOSS Science Resources</i> Inv 1, Part 1, Step 20; Inv 1, Part 7, Steps 9, 10 Inv 2, Part 1, Steps 14, 15 Inv 3, Part 2, Steps 10, 11; Inv 3, Part 4, Steps 8, 9; Inv 3, Part 5, Step 2 Inv 4, Part 1, Steps 16, 17 Inv 4, Part 2, Steps 14, 15 |
| Craft and Structure | 4. With prompting and support, ask and answer questions about unknown words in a text. | All investigations provide opportunities for students to ask and answer questions to determine the meaning of new words and phrases while reading articles in <i>FOSS Science Resources</i> . Selected example Inv 2, Part 1, Step 13 |
| | 5. Identify the front cover, back cover, and title page of a book. | Discuss text features in <i>FOSS Science Resources</i> Inv 1, Part 1, Step 19 |

Common Core State Standards for English language arts and literacy in history/social studies science and technical subjects (National Governors Association Center for Best Practices and Council of Chief State School Officers, 2010).

| Trees and Weather Module | Animals Two by Two Module |
|--|---|
| <p>Discuss articles in <i>FOSS Science Resources</i> Inv 1, Part 5, Steps 9, 10; Inv 1, Part 6, Step 11 Inv 2, Part 1, Step 1; Inv 2, Part 6, Steps 6, 7 Inv 3, Part 1, Steps 10, 11 ; Inv 3, Part 3, Steps 9, 10, 12 Inv 4, Part 2, Step 8; Inv 4, Part 4, Step 9; Inv 4, Part 9, Step 9</p> | <p>Discuss articles in <i>FOSS Science Resources</i> Inv 1, Part 4, Steps 7, 8, 12; Inv 1, Part 5, Steps 21, 22 Inv 2, Part 3, Steps 17, 18 Inv 3, Part 3, Steps 9, 10 Inv 4, Part 2, Steps 8, 9; Inv 4, Part 3, Steps 11, 12; Inv 4, Part 4, Steps 12, 14</p> |
| <p>Discuss and review articles in <i>FOSS Science Resources</i> Inv 1, Part 5, Steps 9, 10; Inv 1, Part 6, Step 2; Inv 1, Part 6, Step 11 Inv 2, Part 6, Step 7 Inv 3, Part 1, Steps 10, 11; Inv 3, Part 3, Step 10 Inv 4, Part 2, Step 8; Inv 4, Part 4, Step 9; Inv 4, Part 9, Step 9</p> | <p>Discuss and review articles in <i>FOSS Science Resources</i> Inv 1, Part 4, Step 11; Inv 1, Part 5, Step 22 Inv 2, Part 3, Steps 17, 18 Inv 3, Part 3, Steps 9, 10 Inv 4, Part 2, Steps 8, 9; Inv 4, Part 2, Steps 8, 9; Inv 4, Part 3, Steps 11, 12; Inv 4, Part 4, Steps 11, 12, 14</p> |
| <p>Discuss articles in <i>FOSS Science Resources</i> Inv 1, Part 5, Steps 9, 10; Inv 1, Part 6, Step 11 Inv 2, Part 6, Steps 6, 7 Inv 3, Part 1, Steps 10, 11; Inv 3, Part 3, Steps 9, 10, 12 Inv 4, Part 2, Step 8; Inv 4, Part 4, Step 9; Inv 4, Part 9, Step 9</p> | <p>Discuss articles in <i>FOSS Science Resources</i> Inv 1, Part 4, Steps 8, 11; Inv 1, Part 5, Steps 21, 22 Inv 2, Part 3, Steps 17, 18 Inv 3, Part 3, Steps 9, 10 Inv 4, Part 2, Steps 8-10; Inv 4, Part 3, Step 12; Inv 4, Part 4, Steps 12, 14</p> |
| <p>All investigations provide opportunities for students to ask and answer questions to determine the meaning of new words and phrases while reading articles in <i>FOSS Science Resources</i>.</p> <p>Selected examples Inv 2, Part 1, Step 1 Inv 3, Part 3, Step 12</p> | <p>All investigations provide opportunities for students to ask and answer questions to determine the meaning of new words and phrases while reading articles in <i>FOSS Science Resources</i>.</p> <p>Selected examples Inv 1, Part 4, Step 7 Inv 3, Part 3, Step 11</p> |
| <p>Discuss text features in <i>FOSS Science Resources</i> Inv 1, Part 5, Step 8 Inv 2, Part 1, Step 1</p> | <p>Discuss text features in <i>FOSS Science Resources</i> Inv 1, Part 4, Step 6</p> |

READING STANDARDS FOR INFORMATIONAL TEXT (CONT.)

| | Grade K Standard | Materials and Motion Module |
|---|--|---|
| Integration of Knowledge and Ideas | 7. With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts). | <p>All investigations provide opportunities for students to describe the relationship between the photographs and the text in the <i>FOSS Science Resources</i> articles.</p> <p>Selected examples Inv 1, Part 1, Steps 19, 20; Inv 1, Part 7, Step 9 Inv 2, Part 1, Steps 12, 13 Inv 3, Part 4, Step 8; Inv 3, Part 5, Step 1 Inv 4, Part 1, Steps 16, 17 Inv 4, Part 2, Steps 14, 15</p> |
| | 8. With prompting and support, identify the reasons an author gives to support points in a text. | <p>Read and discuss articles in <i>FOSS Science Resources</i> Inv 1, Part 1, Steps 19, 20 Inv 3, Part 4, Step 8 Inv 4, Part 1, Step 17</p> |
| | 9. With prompting and support, identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures). | <p>Students can read their <i>FOSS Science Resources</i> as well as readings suggested on FOSSweb to compare and contrast how science ideas are communicated.</p> <p>Selected examples Inv 2, Part 1, Step 15; Inv 2, Art and Engineering Extensions. Examine paper-illustration techniques Inv 3, Science and Engineering Extensions, Show how knit fabric is made</p> |
| Range of Reading and Level of Text Complexity | 10. Actively engage in group reading activities with purpose and understanding. | <p>All investigations involve interactive reading of science text.</p> <p>Selected examples Inv 1, Part 1, Steps 19, 20; Inv 1, Part 7, Steps 9, 10 Inv 2, Part 1, Steps 12-15 Inv 3, Part 2, Steps 10, 11; Inv 3, Part 4, Steps 8, 9; Inv 3, Part 5, Steps 1, 2 Inv 4, Part 1, Step 16 Inv 4, Part 2, Step 14</p> |

| Trees and Weather Module | Animals Two by Two Module |
|---|--|
| <p>All investigations provide opportunities for students to describe the relationship between the photographs and the text in the <i>FOSS Science Resources</i> articles.</p> <p>Selected examples Inv 1, Part 5, Steps 8, 9; Inv 1, Part 6, Step 11 Inv 2, Part 1, Step 1 Inv 3, Part 3, Step 12</p> | <p>All investigations provide opportunities for students to describe the relationship between the photographs and the text in the <i>FOSS Science Resources</i> articles.</p> <p>Selected examples Inv 1, Part 4, Steps 6, 9, 12; Inv 1, Part 5, Steps 21, 23 Inv 2, Part 3, Steps 17-20 Inv 3, Part 3, Step 12 Inv 4, Part 2, Step 11; Inv 4, Part 4, Step 14</p> |
| <p>Read and discuss articles in <i>FOSS Science Resources</i> Inv 4, Part 2, Step 8</p> | <p>Read and discuss articles in <i>FOSS Science Resources</i> Inv 1, Part 5, Step 21 Inv 2, Part 3, Step 20 Inv 3, Part 3, Step 12 Inv 4, Part 2, Step 11; Inv 4, Part 4, Step 14</p> |
| <p>Students can read their <i>FOSS Science Resources</i> as well as readings suggested on FOSSweb to compare and contrast how science ideas are communicated.</p> <p>Selected examples Inv 3, Part 3, Step 12; Inv 3, Language Extensions. Read weather related literature and poetry Inv 4, Part 2, Step 8</p> | <p>Students can read their <i>FOSS Science Resources</i> as well as readings suggested on FOSSweb to compare and contrast how science ideas are communicated.</p> <p>Selected examples Inv 2, Part 3, Step 20 Inv 3, Part 3, Step 12 Inv 4, Part 2, Step 11</p> |
| <p>All investigations involve interactive reading of science text.</p> <p>Selected examples Inv 1, Part 5, Steps 8-10; Inv 1, Part 6, Steps 1, 10, 11 Inv 2, Part 1, Step 1; Inv 2, Part 6, Steps 6, 7 Inv 3, Part 1, Steps 10, 11; Inv 3, Part 3, Steps 9-12 Inv 4, Part 2, Steps 7, 8; Inv 4, Part 4, Step 9; Inv 4, Part 9, Steps 8, 9</p> | <p>All investigations involve interactive reading of science text.</p> <p>Selected examples Inv 1, Part 4, Steps 6-12; Inv 1, Part 5, Steps 21-23 Inv 2, Part 3, Steps 17-20 Inv 3, Part 3, Steps 9-12 Inv 4, Part 2, Steps 8-11; Inv 4, Part 3, Steps 11-13; Inv 4, Part 4, Steps 11, 12, 14</p> |

READING STANDARDS: FOUNDATIONAL SKILLS

| | Grade K Standard | Materials and Motion Module |
|------------------------|--|---|
| Print Concepts | <p>1. Demonstrate understanding of the organization and basic features of print.</p> <p>a. Follow words from left to right, top to bottom, and page by page.</p> <p>b. Recognize that spoken words are represented in written language by specific sequences of letters.</p> <p>c. Understand that words are separated by spaces in print.</p> <p>d. Recognize and name all upper- and lowercase letters of the alphabet.</p> | <p>All investigations provide opportunities for students to demonstrate understanding of the organization and basic features of print in <i>FOSS Science Resources</i>.</p> <p>Selected example Inv 3, Part 2, Step 12</p> |
| Phonological Awareness | <p>2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes).</p> <p>a. Recognize and produce rhyming words.</p> <p>b. Count, pronounce, blend, and segment syllables in spoken words.</p> <p>c. Blend and segment onsets and rimes of single-syllable spoken words.</p> <p>d. Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in three-phoneme (consonant-vowel-consonant, or CVC) words.* (This does not include CVCs ending with /l/, /r/, or /x/.)</p> <p>e. Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words.</p> | <p>All investigations provide opportunities for students to demonstrate understanding of spoken words, syllables, and sounds while reading articles in <i>FOSS Science Resources</i>.</p> <p>Selected examples Inv 1, Part 1, Step 1; Inv 1, Part 2, Step 1; Inv 1, Part 3, Step 1; Inv 1, Part 5, Step 6</p> |

| Trees and Weather Module | Animals Two by Two Module |
|--|--|
| <p>All investigations provide opportunities for students to demonstrate understanding of the organization and basic features of print in <i>FOSS Science Resources</i>.</p> <p>Selected example Inv 4, Part 2, Step 8</p> | <p>All investigations provide opportunities for students to demonstrate understanding of the organization and basic features of print in <i>FOSS Science Resources</i>.</p> <p>Selected example Inv 4, Part 4, Step 14</p> |
| <p>All investigations provide opportunities for students to demonstrate understanding of spoken words, syllables, and sounds while reading articles in <i>FOSS Science Resources</i>.</p> <p>Selected examples Inv 1, Part 1, Step 1; Inv 1, Part 2, Step 5; Inv 1, Part 3, Step 1</p> | <p>All investigations provide opportunities for students to demonstrate understanding of spoken words, syllables, and sounds while reading articles in <i>FOSS Science Resources</i>.</p> |

READING STANDARDS: FOUNDATIONAL SKILLS (CONT.)

| | Grade K Standard | Materials and Motion in Our World Module |
|------------------------------|--|--|
| Phonics and Word Recognition | <p>3. Know and apply grade-level phonics and word analysis skills in decoding words.</p> <p>a. Demonstrate basic knowledge of one-to-one letter-sound correspondences by producing the primary sound or many of the most frequent sounds for each consonant.</p> <p>b. Associate the long and short sounds with common spellings (graphemes) for the five major vowels.</p> <p>c. Read common high-frequency words by sight (e.g., <i>the, of, to, you, she, my, is, are, do, does</i>).</p> <p>d. Distinguish between similarly spelled words by identifying the sounds of the letters that differ.</p> | <p>All investigations provide opportunities for students to apply phonics and word analysis skills in decoding words while reading articles in <i>FOSS Science Resources</i>.</p> |
| Fluency | <p>4. Read emergent-reader texts with purpose and understanding.</p> | <p>All investigations provide opportunities for students to reread the articles in the <i>FOSS Science Resources</i> with a partner.</p> <p>Selected examples Inv 1, Part 1, Step 20 Inv 2, Part 1, Step 15 Inv 3, Part 2, Step 11; Inv 3, Part 4, Step 9; Inv 3, Part 5, Step 2</p> |

| Trees and Weather Module | Animals Two by Two Module |
|--|---|
| <p>All investigations provide opportunities for students to apply phonics and word analysis skills in decoding words while reading articles in <i>FOSS Science Resources</i>.</p> | <p>All investigations provide opportunities for students to apply phonics and word analysis skills in decoding words while reading articles in <i>FOSS Science Resources</i>.</p> |
| <p>All investigations provide opportunities for students to reread the articles in the <i>FOSS Science Resources</i> with a partner.</p> <p>Selected examples Inv 1, Part 5, Step 10; Inv 1, Part 6, Step 11 Inv 3, Part 1, Steps 11; Inv 3, Part 3, Step 10 Inv 4, Part 2, Step 8; Inv 4, Part 4, Step 9; Inv 4, Part 9, Steps 8, 9</p> | <p>All investigations provide opportunities for students to reread the articles in the <i>FOSS Science Resources</i> with a partner.</p> <p>Selected examples Inv 4, Part 3, Step 13; Inv 4, Part 4, Step 14</p> |

WRITING STANDARDS

| | Grade K Standard | Materials and Motion Module |
|--|--|--|
| Text Types and Purposes | 1. Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book (e.g., <i>My favorite book is . . .</i>). | <p>All investigations provide opportunities for students to draw, dictate, or write about a science topic, stating their opinion or claim.</p> <p>Selected examples Inv 1, Part 1, Step 20; Inv 1, Part 5, Step 16 Inv 2, Part 2, Step 18 Inv 3, Part 5, Step 9</p> |
| | 2. Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. | <p>All investigations provide opportunities for students to draw, dictate, or write informative/explanatory texts about the science topic they are learning.</p> <p>Selected examples Inv 1, Part 1, Steps 17, 21; Inv 1, Part 2, Step 17; Inv 1, Part 4, Step 11; Inv 1, Language Extensions, Create a class book of objects made of wood. Inv 2, Part 1, Step 10 Inv 3, Part 1, Step 17; Inv 3, Part 2, Step 9; Inv 3, Part 3, Step 10; Inv 3, Part 4, Step 10 Inv 4, Part 1, Step 15; Inv 4, Part 2, Step 13</p> |
| | 3. Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened. | <p>All investigations provide opportunities for students to draw, dictate, and write narratives. Students describe their observations and experiences with the science ideas they are exploring.</p> <p>Selected examples Inv 1, Part 1, Step 21; Inv 1, Part 3, Step 21; Inv 1, Part 6, Step 13; Inv 1, Part 7, Step 8 Inv 2, Part 3, Step 7; Inv 2, Part 4, Step 10; Inv 2, Part 5, Step 14 Inv 4, Part 3, Step 10; Inv 4, Language extension</p> |
| Production and Distribution of Writing | 5. With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed. | <p>The Wrap-up/Warm-up section of each investigation part, provides the opportunity for students to strengthen their notebook entries by revising and adding in new information.</p> <p>Selected examples Inv 1, Part 3, Step 22; Inv 1, Part 5, Step 17 Inv 2, Part 2, Step 19 Inv 4, Part 2, Step 16; Inv 4, Part 4, Step 11</p> |

| Trees and Weather Module | Animals Two by Two Module |
|--|--|
| <p>All investigations provide opportunities for students to draw, dictate, and write about a science topic, stating their opinion or claim.</p> <p>Selected examples Inv 3, Part 1, Step 8 Inv 4, Part 9, Step 6</p> | <p>All investigations provide opportunities for students to draw, dictate, and write about a science topic, stating their opinion or claim.</p> <p>Selected example Inv 2, Part 2, Step 9</p> |
| <p>All investigations provide opportunities for students to draw, dictate, or write informative/explanatory texts about the science topic they are learning.</p> <p>Selected examples Inv 1, Part 1, Step 13; Inv 1, Part 3, Step 6; Inv 1, Part 4, Step 4; Inv 1, Part 6, Step 9 Inv 2, Part 1, Step 13; Inv 2, Part 2, Step 9; Inv 2, Part 3, Step 9 Inv 3, Part 3, Step 6</p> | <p>All investigations provide opportunities for students to draw, dictate, or write informative/explanatory texts about the science topic they are learning.</p> <p>Selected examples Inv 1, Part 1, Step 4; Inv 1, Part 2, Step 8; Inv 1, Part 3, Step 6; Inv 1, Part 4, Step 4; Inv 1, Language Extensions, Write a “facts about fish” book Inv 2, Part 1, Step 6; Inv 2, Part 2, Step 9 Inv 3, Part 1, Step 8; Inv 3, Part 2, Step 16 Inv 4, Part 1, Step 9; Inv 4, Part 2, Step 6; Inv 4, Part 3, Step 8</p> |
| <p>All investigations provide opportunities for students to draw, dictate, and write narratives. Students describe their observations and experiences with the science ideas they are exploring.</p> <p>Selected examples Inv 1, Part 5, Step 6 Inv 2, Part 5, Step 4 Inv 3, Part 2, Step 13 Inv 4, Part 3, Step 5; Inv 4, Part 6, Step 6</p> | <p>All investigations provide opportunities for students to draw, dictate, and write narratives. Students describe their observations and experiences with the science ideas they are exploring.</p> <p>Selected examples Inv 1, Part 5, Steps 13, 20; Inv 1, Language Extensions, Write a story Inv 2, Part 3, Steps 12, 13; Inv 2, Language Extensions, Keep a classroom snail journal</p> |
| <p>The Wrap-up/Warm-up section of each investigation part, provides the opportunity for students to strengthen their notebook entries by revising and adding in new information.</p> <p>Selected examples Inv 1, Part 5, Step 7 Inv 2, Part 1, Step 14; Inv 2, Part 3, Step 11 Inv 3, Part 3, Step 7 Inv 4, Part 3, Step 7; Inv 4, Part 6, Step 8; Inv 4, Part 9, Step 7</p> | <p>The Wrap-up/Warm-up section of each investigation part, provides the opportunity for students to strengthen their notebook entries by revising and adding in new information.</p> <p>Selected examples Inv 1, Part 4, Step 13 Inv 2, Part 1, Step 11 Inv 3, Part 1, Step 11 Inv 4, Part 2, Step 12</p> |

WRITING STANDARDS (CONT.)

| Grade K Standard | Materials and Motion Module |
|--|---|
| <p>7. Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).</p> | <p>In every investigation students record their observations in their notebooks.</p> <p>Selected examples Inv 1 Part 1 Steps 18, 21; Inv 1, Part 2, Step 17; Inv 1, Part 3, Step 22; Inv 1, Part 4, Step 11; Inv 1, Part 5, Step 16; Inv 1, Part 6, Step 13; Inv 1, Part 7, Step 8; Inv 1, Language Extensions, Create a wood chart, Create a class book of objects made of wood. Inv 2, Part 1, Step 10; Inv 2, Part 2, Step 18; Inv 2, Part 3, Step 7; Inv 2, Part 5, Step 14; Inv 2, Language Extension, Make a paper chart Inv 3, Part 1, Step 17; Inv 3, Part 2, Steps 9, 12; Inv 3, Part 3, Step 10; Inv 3, Part 4, Step 10; Inv 3, Part 5, Step 9</p> |
| <p>8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.</p> | <p>All investigations provide students with the opportunity to write about their science experiences and record their observations in their science notebooks.</p> <p>Selected examples Inv 1, Part 1, Step 17, Inv 1, Part 2, Step 17; Inv 1, Part 3, Steps 12, 21; Inv 1, Part 4, Step 11; Inv 1, Part 5, Step 16; Inv 1, Part 6, Step 13; Inv 1, Part 7, Step 8 Inv 2, Part 1, Step 10; Inv 2, Part 2, Step 18; Inv 2, Part 3, Step 7; Inv 2, Part 5, Step 14 Inv 3, Part 1, Step 17; Inv 3, Part 2, Steps 9, 12; Inv 3, Part 3, Step 10; Inv 3, Part 4, Step 10; Inv 3, Part 5, Step 9 Inv 4, Part 1, Step 15; Inv 4, Part 2, Step 13; Inv 4, Part 3, Step 10</p> |

Research to Build and Present Knowledge

| Trees and Weather Module | Animals Two by Two Module |
|---|--|
| <p>In every investigation students record their observations in their notebooks.</p> <p>Selected examples Inv 1, Part 1, Step 13; Inv 1, Part 3, Step 6; Inv 1, Part 6, Steps 9, 10; Language Extension. Make a tree-observation class book Inv 2, Part 1, Step 13; Inv 2, Part 2, Step 9; Inv 2, Part 3, Step 9 Inv 3, Part 1, Step 8; Inv 3, Part 2, Step 13; Inv 3, Part 3, Step 6 Inv 4, Part 3, Step 5; Inv 4, Part 3, Step 7; Inv 4, Part 5, Step 7; Inv 4, Part 9, Step 4</p> | <p>In every investigation students record their observations in their notebooks.</p> <p>Selected examples Inv 1, Part 1, Steps 4, 5; Inv 1, Part 2, Step 8; Inv 1, Part 3, Step 6; Inv 1, Part 4, Steps 4, 12; Inv 1, Part 5, Steps 13, 20; Inv 1, Science Extensions, Identify animals that eat fish Inv 2, Part 1, Step 6; Inv 2, Part 3, Steps 12, 13, 16 Inv 3, Part 1, Step 8; Inv 3, Part 2, Step 16; Language Extension, Keep a classroom worm book Inv 4, Part 1, Step 9; Inv 4, Language Extension, Make a classroom isopod journal; Inv 4, Science Extension, Find out about other crustaceans</p> |
| <p>All investigations provide students with the opportunity to write about their science experiences and record their observations in their science notebooks.</p> <p>Selected examples Inv 1, Part 1, Step 13; Inv 1, Part 3, Step 6; Inv 1, Part 5, Step 6; Inv 1, Part 6, Step 9 Inv 2, Part 1, Step 13; Inv 2, Part 2, Step 9; Inv 2, Part 3, Step 9 Inv 3, Part 1, Step 8; Inv 3, Part 2, Step 13; Inv 3, Part 3, Step 6 Inv 4, Part 2, Step 8; Inv 4, Part 3, Step 5; Inv 4, Part 6, Step 6</p> | <p>All investigations provide students with the opportunity to write about their science experiences and record their observations in their science notebooks.</p> <p>Selected examples Inv 1, Part 1, Step 4; Inv 1, Part 2, Step 8; Inv 1, Part 3, Step 6; Inv 1, Part 4, Step 4; Inv 1, Part 5, Steps 13, 20, 22 Inv 2, Part 1, Step 6; Inv 2, Part 3, Steps 12, 13 Inv 3, Part 1, Step 8; Inv 3, Part 2, Step 16 Inv 4, Part 1, Step 9</p> |

SPEAKING AND LISTENING STANDARDS

| Grade K Standard | Materials and Motion |
|---|---|
| <p>1. Participate in collaborative conversations with diverse partners about <i>kindergarten topics and texts</i> with peers and adults in small and larger groups.</p> <p>a. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).</p> <p>b. Continue a conversation through multiple exchanges.</p> | <p>All investigations provide students ample opportunities to engage in collaborative discussions. Students discuss before, during, and after the active investigation, when reading articles in the <i>FOSS Science Resources</i>, and during the Wrap-up/Warm-up section.</p> <p>Selected examples Inv 1, Part 1, Steps 11, 19, 20, 22; Inv 1, Part 2, Steps 13, 18; Inv 1, Part 3, Step 22; Inv 1, Part 4, Step 12; Inv 1, Part 5, Steps 1, 17; Inv 1, Part 6, Step 15 Inv 2, Part 1, Step 11; Inv 2, Part 2, Steps 2, 19; Inv 2, Part 3, Step 15; Inv 2, Part 4, Step 11 Inv 3, Part 1, Step 18; Inv 3, Part 2, Step 14; Inv 3, Part 3, Step 10; Inv 3, Part 4, Steps 8, 9, 11; Inv 3, Part 5, Step 14 Inv 4, Part 1, Step 18</p> |
| <p>2. Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.</p> | <p>All investigations provide opportunities for students to ask and answer questions about key details in <i>FOSS Science Resources</i> articles and information presented orally.</p> <p>Selected examples Inv 1, Part 1, Steps 19, 20, 22; Inv 1, Part 2, Steps 6, 10, 15; Inv 1, Part 3, Steps 8, 22; Inv 1, Part 4, Steps 3, 5; Inv 1, Part 6, Steps 1, 4, 13; Inv 1, Part 7, Step 10 Inv 2, Part 2, Step 7 Inv 3, Part 2, Step 5; Inv 3, Part 3, Steps 1,2; Inv 3, Part 4, Steps 8, 9 Inv 4, Part 1, Step 17</p> |
| <p>3. Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</p> | <p>All investigations provide students with the opportunity to ask and answer questions about how they answered the focus question during the Wrap-up/Warm-up section. Other opportunities arise when students present information to their group or the whole class.</p> <p>Selected examples Inv 1, Part 1, Steps 4, 6; Inv 1, Part 2, Step 2; Inv 1, Part 4, Step 8; Inv 1, Part 5, Steps 8, 10, 12, 13 Inv 2, Part 2, Steps 5, 14; Inv 2, Part 3, Steps 1, 3, 4; Inv 2, Part 4, Step 6; Inv 2, Part 5, Steps 6, 11 Inv 3, Part 1, Steps 4, 8; Inv 3, Part 2, Step 1; Inv 3, Part 3, Steps 5-7; Inv 3, Part 4, Steps 5, 7; Inv 3, Part 5, Step 1</p> |

| Trees and Weather | Animals Two by Two |
|--|--|
| <p>All investigations provide students ample opportunities to engage in collaborative discussions. Students discuss before, during, and after the active investigation, when reading articles in the <i>FOSS Science Resources</i>, and during the Wrap-up/Warm-up section.</p> <p>Selected examples Inv 1, Part 1, Steps 15, 16; Inv 1, Part 3, Step 7; Inv 1, Part 4, Step 6; Inv 1, Part 6, Step 12 Inv 2, Part 1, Step 14; Inv 2, Part 2, Step 10; Inv 2, Part 3, Step 11; Inv 2, Part 5, Step 1 Inv 3, Part 1, Step 9; Inv 3, Part 2, Step 14; Inv 3, Part 3, Step 7 Inv 4, Part 6, Step 8; Inv 4, Part 9, Step 7</p> | <p>All investigations provide students ample opportunities to engage in collaborative discussions. Students discuss before, during, and after the active investigation, when reading articles in the <i>FOSS Science Resources</i>, and during the Wrap-up/Warm-up section.</p> <p>Selected examples Inv 1, Part 1, Step 6; Inv 1, Part 2, Step 10; Inv 1, Part 3, Step 8; Inv 1, Part 5, Step 24 Inv 2, Part 2, Step 11; Inv 2, Part 3, Steps 21, 22 Inv 3, Part 1, Step 11; Inv 3, Part 2, Step 19; Inv 3, Part 3, Step 13 Inv 4, Part 1, Step 12; Inv 4, Part 2, Step 12; Inv 4, Part 3, Step 14</p> |
| <p>All investigations provide opportunities for students to ask and answer questions about key details in <i>FOSS Science Resources</i> articles and information presented orally.</p> <p>Selected examples Inv 1, Part 1, Step 10; Inv 1, Part 4, Step 6; Inv 1, Part 5, Steps 1, 3, 6, 10; Inv 1, Part 6, Step 12 Inv 2, Part 2, Step 1; Inv 2, Part 6, Steps 6, 7 Inv 3, Part 1, Steps 10, 11; Inv 3, Part 2, Step 7; Inv 3, Part 3, Steps 8, 10, 12 Inv 4, Part 5, Step 1; Inv 4, Part 9, Step 9</p> | <p>All investigations provide opportunities for students to ask and answer questions about key details in <i>FOSS Science Resources</i> articles and information presented orally.</p> <p>Selected examples Inv 1, Part 3, Steps 1, 2, 4; Inv 1, Part 4, Steps 8, 11; Inv 1, Part 5, Steps 7, 14 Inv 2, Part 1, Step 10; Inv 2, Part 2, Step 5; Inv 2, Part 3, Step 15 Inv 3, Part 2, Steps 8, 14; Inv 3, Part 3, Steps 5, 13 Inv 4, Part 3, Steps 6, 14; Inv 4, Part 4, Step 2</p> |
| <p>All investigations provide students with the opportunity to ask and answer questions about how they answered the focus question during the Wrap-up/Warm-up section. Other opportunities arise when students present information to their group or the whole class.</p> <p>Selected examples Inv 1, Part 1, Steps 4-6; Inv 1, Part 5, Step 10; Inv 1, Part 6, Step 2 Inv 2, Part 1, Step 3; Inv 2, Part 4, Step 6 Inv 3, Part 2, Steps 9-11; Inv 3, Part 3, Steps 1, 3 Inv 4, Part 1, Steps 1, 2; Inv 4, Part 2, Step 1; Inv 4, Part 5, Steps 3, 6; Inv 4, Part 7, Step 1; Inv 4, Part 8, Steps 1, 2</p> | <p>All investigations provide students with the opportunity to ask and answer questions about how they answered the focus question during the Wrap-up/Warm-up section. Other opportunities arise when students present information to their group or the whole class.</p> <p>Selected examples Inv 1, Part 1, Step 2; Inv 1, Part 2, Steps 3-6; Inv 1, Part 4, Steps 2, 8, 11; Inv 1, Part 5, Steps 3, 5, 6, 10, 11, 16, 20 Inv 2, Part 1, Steps 3-5; Inv 2, Part 2, Step 6; Inv 2, Part 3, Steps 5, 7, 11 Inv 3, Part 1, Step 6; Inv 3, Part 2, Steps 4-6, 18; Inv 3, Part 3, Steps 3, 4 Inv 4, Part 1, Step 4; Inv 4, Part 3, Steps 3-5; Inv 4, Part 4, Step 6</p> |

SPEAKING AND LISTENING STANDARDS (CONT.)

| Grade K Standard | Materials and Motion Module |
|--|--|
| <p>4. Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.</p> | <p>All investigations provide students with the opportunity to describe what they observe and learn about science topics. In the Wrap-up/ Warm-up section students describe what they did in the investigation and share their answers to the focus question.</p> <p>Selected examples Inv 1, Part 1, Steps 6, 14, 19; Inv 1, Part 3, Step 13; Inv 1, Part 4, Step 1; Inv 1, Part 5, Step 1; Inv 1, Part 6, Step 1 Inv 3, Part 1, Step 1 Inv 4, Part 1, Steps 16, 17</p> |
| <p>5. Add drawings or other visual displays to descriptions as desired to provide additional detail.</p> | <p>Students are encouraged to use their notebook drawings to explain their answers to the focus question in the Wrap-up/Warm-up sections.</p> <p>Selected examples Inv 1, Part 1, Step 22; Inv 1, Part 3, Steps 18, 22; Inv 1, Part 4, Step 12; Inv 1, Part 5, Step 17; Inv 1, Part 6, Step 15; Inv 1, Part 7, Step 11 Inv 3, Part 1, Step 18; Inv 3, Part 5, Step 14; Inv 3, Part 6, Step 1 Inv 4, Part 1, Step 18 Inv 4, Part 2, Step 16</p> |
| <p>6. Speak audibly and express thoughts, feelings, and ideas clearly.</p> | <p>All investigations provide students with the opportunity to speak audibly and express their thoughts, feelings, and ideas about their science learning.</p> <p>Selected examples Inv 1, Part 1, Steps 14, 19, 20; Inv 1, Part 3, Steps 8, 22 Inv 2, Part 4, Step 2 Inv 3, Part 1, Step 18; Inv 3, Part 2, Step 12; Inv 3, Part 3, Step 3; Inv 3, Part 4, Steps 9, 11; Inv 3, Part 5, Step 7 Inv 4, Part 2, Step 16</p> |

Presentation of Knowledge and Ideas

| Trees and Weather Module | Animals Two by Two Module |
|---|---|
| <p>All investigations provide students with the opportunity to describe what they observe and learn about science topics. In the Wrap-up/Warm-up section students describe what they did in the investigation and share their answers to the focus question.</p> <p>Selected examples Inv 1, Part 1, Step 2; Inv 1, Part 5, Steps 7, 9, 10, 11; Inv 1, Part 6, Steps 10, 12 Inv 2, Part 6, Steps 6, 7 Inv 3, Part 1, Steps 2, 3, 10; Inv 3, Part 2, Steps 4, 5 Inv 4, Part 2, Step 8; Inv 4, Part 4, Steps 8, 9; Inv 4, Part 6, Step 1; Inv 4, Part 7, Step 1; Inv 4, Part 9, Step 1</p> | <p>All investigations provide students with the opportunity to describe what they observe and learn about science topics. In the Wrap-up/Warm-up section students describe what they did in the investigation and share their answers to the focus question.</p> <p>Selected examples Inv 1, Part 4, Step 6; Inv 1, Part 5, Step 1 Inv 2, Part 1, Step 2; Inv 2, Part 2, Step 2; Inv 2, Part 3, Step 1 Inv 4, Part 1, Step 1; Inv 4, Part 3, Step 11</p> |
| <p>Students are encouraged to use their notebook drawings to explain their answers to the focus question in the Wrap-up/Warm-up sections.</p> <p>Selected examples Inv 1, Part 2, Step 5; Inv 1, Part 4, Step 6; Inv 1, Part 5, Step 11 Inv 3, Part 1, Step 11; Inv 3, Part 2, Step 14; Inv 3, Part 3, Step 7 Inv 4, Part 9, Step 7</p> | <p>Students are encouraged to use their notebook drawings to explain their answers to the focus question in the Wrap-up/Warm-up sections.</p> <p>Selected examples Inv 1, Part 3, Step 4 Inv 3, Part 1, Step 11; Inv 3, Part 2, Step 19 Inv 4, Part 2, Step 12; Inv 4, Part 4, Step 8</p> |
| <p>All investigations provide students with the opportunity to speak audibly and express their thoughts, feelings, and ideas about their science learning.</p> <p>Selected examples Inv 1, Part 1, Step; Inv 1, Part 3, Step 7; Inv 1, Part 4, Step 6; Inv 1, Part 6, Step 12 Inv 2, Part 6, Steps 6, 7 Inv 3, Part 1, Step 9; Inv 3, Part 2, Step 1; Inv 3, Part 3, Steps 7, 12 Inv 4, Part 2, Step 7; Inv 4, Part 7, Step 2; Inv 4, Part 9, Step 9</p> | <p>All investigations provide students with the opportunity to speak audibly and express their thoughts, feelings, and ideas about their science learning.</p> <p>Selected examples Inv 1, Part 3, Step 1 Inv 2, Part 3, Step 22 Inv 3, Part 3, Step 13 Inv 4, Part 3, Step 1; Inv 4, Part 3, Step 12</p> |

LANGUAGE STANDARDS

| | Grade K Standard | Materials and Motion Module |
|---------------------------------|---|--|
| Conventions of Standard English | <p>1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.</p> <ul style="list-style-type: none"> a. Print many upper- and lowercase letters. b. Use frequently occurring nouns and verbs. c. Form regular plural nouns orally by adding /s/ or /es/ (e.g., <i>dog, dogs; wish, wishes</i>). d. Understand and use question words (interrogatives) (e.g., <i>who, what, where, when, why, how</i>). e. Use the most frequently occurring prepositions (e.g., <i>to, from, in, out, on, off, for, of, by, with</i>). f. Produce and expand complete sentences in shared language activities. | <p>All investigations provide opportunities for students to demonstrate the conventions of standard English grammar when writing and speaking.</p> <p>Selected examples Inv 1, Part 1, Steps 1, 5, 14, 15, 17, 18, 21; Inv 1, Part 2, Step 17; Inv 1, Part 3, Steps 11, 12; Inv 1, Part 4, Steps 10-12; Inv 1, Part 5, Step 16; Inv 1, Part 7, Step 8 Inv 2, Part 1, Step 10 Inv 3, Part 2, Step 12</p> |
| | <p>2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.</p> <ul style="list-style-type: none"> a. Capitalize the first word in a sentence and the pronoun <i>I</i>. b. Recognize and name end punctuation. c. Write a letter or letters for most consonant and short-vowel sounds (phonemes). d. Spell simple words phonetically, drawing on knowledge of sound-letter relationships. | <p>All investigations provide opportunities for students to demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing in their science notebooks.</p> |
| Vocabulary Acquisition and Use | <p>4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>kindergarten reading and content</i>.</p> <ul style="list-style-type: none"> a. Identify new meanings for familiar words and apply them accurately (e.g., knowing <i>duck</i> is a bird and learning the verb to <i>duck</i>). b. Use the most frequently occurring inflections and affixes (e.g., <i>-ed, -s, re-, un-, pre-, -ful, -less</i>) as a clue to the meaning of an unknown word. | <p>All investigations provide opportunities for students to practice strategies for determining or clarifying the meaning of unknown and multiple-meaning words and phrases while discussing the investigations and articles in <i>FOSS Science Resources</i>.</p> <p>Selected examples Inv 1, Part 1, Step 15; Inv 1, Part 2, Step 12; Inv 1, Part 3, Step 19; Inv 1, Part 7, Step 7 Inv 2, Part 1, Step 9; Inv 2, Part 2, Step 17; Inv 2, Part 3, Step 6; Inv 2, Part 4, Step 9; Inv 2, Part 5, Step 12 Inv 3, Part 1, Step 14; Inv 3, Part 2, Step 12; Inv 3, Part 3, Step 9; Inv 3, Part 5, Steps 2, 3, 5</p> |

| Trees and Weather Module | Animals Two by Two Module |
|---|---|
| <p>All investigations provide opportunities for students to apply the conventions of English grammar when writing and speaking.</p> <p>Selected examples Inv 1, Part 6, Step 9 Inv 2, Part 1, Step 13; Inv 2, Part 2, Step 9; Inv 2, Part 3, Step 9 Inv 3, Part 1, Steps 9, 10; Inv 3, Part 2, Step 13; Inv 3, Part 3, Steps 6, 7</p> | <p>All investigations provide opportunities for students to apply the conventions of English grammar when writing and speaking.</p> <p>Selected examples Inv 1, Part 2, Step 8; Inv 1, Part 3, Step 6; Inv 1, Part 5, Step 20 Inv 2, Part 2, Step 9; Inv 2, Part 3, Step 22 Inv 3, Part 2, Step 16</p> |
| <p>All investigations provide opportunities for students to demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing in their science notebooks.</p> | <p>All investigations provide opportunities for students to demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing in their science notebooks.</p> |
| <p>All investigations provide opportunities for students to practice strategies for determining or clarifying the meaning of unknown and multiple-meaning words and phrases while discussing the investigations and articles in <i>FOSS Science Resources</i>.</p> <p>Selected examples Inv 1, Part 1, Step 12; Inv 1; Inv 1, Part 5, Step 5 Inv 2, Part 3, Step 8; Inv 2, Part 4, Step 7 Inv 3, Part 1, Step 4; Inv 3, Part 2, Step 12; Inv 3, Part 3, Step 5 Inv 4, Part 3, Step 4; Inv 4, Part 6, Step 5</p> | <p>All investigations provide opportunities for students to practice strategies for determining or clarifying the meaning of unknown and multiple-meaning words and phrases while discussing the investigations and articles in <i>FOSS Science Resources</i>.</p> <p>Selected examples Inv 1, Part 1, Step 3; Inv 1, Part 2, Step 7; Inv 1, Part 3, Step 5; Inv 1, Part 4, Step 3; Inv 1, Part 5, Steps 12, 19 Inv 2, Part 1, Step 9; Inv 2, Part 2, Step 8; Inv 2, Part 3, Step 9 Inv 3, Part 1, Step 7; Inv 3, Part 2, Step 15; Inv 3, Part 3, Step 6 Inv 4, Part 1, Step 8</p> |

LANGUAGE STANDARDS (CONT.)

| Grade K Standard | Materials and Motion Module |
|---|--|
| <p>5. With guidance and support from adults, explore word relationships and nuances in word meanings.</p> <ul style="list-style-type: none"> a. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent. b. Demonstrate understanding of frequently occurring verbs and adjectives by relating them to their opposites (antonyms). c. Identify real-life connections between words and their use (e.g., note places at school that are <i>colorful</i>). d. Distinguish shades of meaning among verbs describing the same general action (e.g., <i>walk, march, strut, prance</i>) by acting out the meanings. | <p>All investigations provide students with opportunities to explore word relationships and nuances of certain words that have a specific meaning in science, such as observe, senses, material, rough, smooth, grain, properties, absorb, bead, float, sink, soak, spread, graph, change, mixture, shavings, waterlogged, separate, screen, evaporate, mix, layers, paper, fabric, cloth, waterproof, and structures.</p> <p>Selected examples Inv 1, Part 1, Step 4; Inv 1, Part 2, Steps 6, 10; Inv 1, Part 3, Steps 2, 7; Inv 1, Part 4, Steps 1, 5; Inv 1, Part 5, Steps 6, 16; Inv 1, Part 6, Steps 1, 2; Inv 1, Part 7, Steps 1, 7; Inv 1, Language Extension, Create a sorting challenge Inv 2, Part 1, Steps 3, 9; Inv 2, Part 2, Step 8 Inv 3, Part 1, Step 9; Inv 3, Part 2, Steps 3, 5; Inv 3, Part 3, Step 4; Inv 3, Language Extension, Make word and fabric cards</p> |
| <p>6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts.</p> | <p>All investigations provide opportunities for students to use new science words and phrases acquired through science discussions and readings. Science vocabulary words are in bold when they are first introduced to students in <i>FOSS Science Resources</i>. Students also review the vocabulary in the Review vocabulary section for each part of each investigation.</p> <p>Selected examples Inv 1, Part 1, Steps 1, 2, 4-9, 15, 17-18; Inv 1, Part 2, Steps 1, 6, 7, 10, 12, 17, 18; Inv 1, Part 3, Steps 1, 4, 7, 9, 11, 12, 17, 18, 19, 21; Inv 1, Part 4, Steps 1, 2, 5, 10, 11; Inv 1, Part 5, Steps 6, 8-10, 15-18; Inv 1, Part 6, Steps 2, 5, 6, 9, 12, 13; Inv 1, Part 7, Steps 1, 5, 7, 8 Inv 2, Part 1, Steps 9, 10; Inv 2, Part 2, Steps 8, 14, 17, 18; Inv 2, Part 3, Step 6; Inv 2, Part 4, Steps 1, 3, 7, 9, 10; Inv 2, Part 5, Steps 1, 4, 7, 10, 12 Inv 3, Part 1, Steps 1, 5, 9, 12, 14, 17, 18; Inv 3, Part 3, Steps 3, 5, 8, 9, 12, 14; Inv 3, Part 5, Steps 2, 3, 5, 8, 9; Inv 3, Part 6, Step 1</p> |

Trees and Weather Module

All investigations provide students with opportunities to explore word relationships and nuances of certain words that have a specific meaning in science, such as **observe, plant, tree, trunk, stem, roots, compare, shape, patterns, similar, adopt, living, nonliving, bark, circumference, textures, flowers, seeds, cones, need, space, toothed, lobed, rough, rounded, property, paddle. line, spear, oval, heart, silhouette, outline, weather, air, clouds, monitor, hot, cold, temperature, thermometer, freezing, cold, warm, wind, direction, blossom, bud, evergreen, fall, flower, food, forcing, needle scale, season, spring, summer, winter, and swollen.**

Selected examples

Inv 1, Part 3, Steps 2, 3, 6; Inv 1, Part 4, Steps 2, 5, 6;
 Inv 1, Part 5, Step 13; Inv 1, Part 6, Step 10
 Inv 2, Part 1, Step 9; Inv 2, Part 2, Step 2; Inv 2, Part 3,
 Steps 4-6; Inv 2, Part 4, Step 6
 Inv 3, Part 2, Step 1; Inv 3, Part 3, Step 10
 Inv 4, Part 3, Step 2; Inv 4, Parts 1, 6; Inv 4, Part 7,
 Steps 1, 2

Animals Two by Two Module

All investigations provide students with opportunities to explore word relationships and nuances of certain words that have a specific meaning in science, such as **animal, parts, surface, male, female, bill, foot, tentacle, shell, rough, smooth, soil, segment, shelter, bristle, isopods, section, antennae, protect, living, and nonliving.**

Selected examples

Inv 1, Part 2, Steps 3, 5, 6; Inv 1, Part 3, Step 4;
 Inv 1, Part 4, Steps 2, 12; Inv 1, Part 5, Step 14
 Inv 2, Part 1, Step 10; Inv 2, Part 2, Steps 6, 7;
 Inv 2, Part 3, Steps 8, 16
 Inv 3, Part 2, Step 4; Inv 3, Part 3, Steps 3, 13
 Inv 4, Part 4, Step 12

All investigations provide opportunities for students to use new science words and phrases acquired through science discussions and readings. Science vocabulary words are in bold when they are first introduced to students in *FOSS Science Resources*. Students also review the vocabulary in the Review vocabulary section for each part of each investigation.

Selected examples

Inv 1, Part 1, Steps 1, 2, 4, 5, 6, 9; Part 2, Steps 3-5;
 Inv 1, Part 3, Steps 1, 2, 7; Inv 1, Part 4, Steps 5, 6;
 Inv 1, Part 5, Steps 2-5; Inv 1, Part 6, Step 11
 Inv 2, Part 1, Steps 9, 10, 13, 14; Inv 2, Part 2, Steps
 3-5, 9, 10; Inv 2, Part 3, Steps 4-6, 8, 9, 11; Inv 2, Part 4,
 Steps 2, 3, 7
 Inv 3, Part 1, Steps 1, 2, 4-6, 8, 9; Inv 3, Part 2, Steps 1,
 2, 12; Inv 3, Part 3, Steps 1, 2, 5, 6, 10
 Inv 4, Part 2, Steps 3, 8; Inv 4, Part 3, Steps 1, 4;
 Inv 4, Parts 1, 4; Inv 4, Part 5, Steps 3, 4; Inv 4, Part 6,
 Step 5; Inv 4, Part 7, Steps 1, 2; Inv 4, Part 8, Step 5; Inv
 4, Part 9, Steps 4, 5

All investigations provide opportunities for students to use new science words and phrases acquired through science discussions and readings. Science vocabulary words are in bold when they are first introduced to students in *FOSS Science Resources*. Students also review the vocabulary in the Review vocabulary section for each part of each investigation.

Selected examples

Inv 1, Part 1, Steps 1-4; Inv 1, Part 2, Steps 1, 3-8; Inv 1, Part 3,
 Steps 1, 2, 5; Inv 1, Part 4, Steps 2-4; Inv 1, Part 5, Steps 1, 7,
 10, 12, 13, 19
 Inv 2, Part 1, Steps 3, 9, 10; Inv 2, Part 2, Steps 2, 7-9; Inv 2,
 Part 3, Steps 6, 8, 9, 11, 12
 Inv 3, Part 1, Steps 2, 3, 6, 7; Inv 3, Part 2, Steps 4, 14-16; Inv 3,
 Part 3, Steps 3, 4
 Inv 4, Part 1, Steps 2, 4, 8; Inv 4, Part 2, Steps 1, 3, 5; Inv 4, Part
 3, Step 8; Inv 4, Part 4, Step 7

